=> d his

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     (FILE 'HOME' ENTERED AT 14:08:07 ON 17 SEP 1999)
     FILE 'CA' ENTERED AT 14:08:14 ON 17 SEP 1999
L1    47879 S WBC OR(WHITE OR BLOOD OR LEUKOCYTE)(5A)(DIFFERENT? OR COUNT?)
L2     4294 S L1 AND(LYSE OR LYSING OR LYTIC OR LYSIS)
L3      662 S L1 AND DILU?
L4      112 S L3 AND L2
L5      978 S L1 AND(APPARAT? OR APP OR DEVICE OR AUTOMAT?)
L6     1975 S L1 AND FLOW?
L7      140 S L5 AND L6
L8    13333 S L1 AND(ANIMAL OR SPECIE)
L9     1104 S L2 AND L8
L10      17 S L5 AND L9
L11      36 S L6 AND L9
L12      24 S L3 AND L9
L13     150 S L5 AND L8
L14      18 S L4 AND L5
L15      24 S L4 AND L8
L16       6 S L3 AND L13
L17      91 S L10-12,L14-L16
L18      56 S L17 NOT PY>1995
L19      24 S L18 NOT(VECTOR OR VIRUS OR IMMUN?)
     FILE 'MEDLINE' ENTERED AT 14:29:56 ON 17 SEP 1999
L20      89 S L19
     FILE 'BIOSIS' ENTERED AT 14:32:18 ON 17 SEP 1999
L21      71 S L19
     FILE 'CA, MEDLINE, BIOSIS' ENTERED AT 14:35:26 ON 17 SEP 1999
L22     173 DUP REM L19 L20 L21 (11 DUPLICATES REMOVED)
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=> d l22 bib,ab 1-173

L22 ANSWER 45 OF 173 CA COPYRIGHT 1999 ACS
AN 119:135041 CA
TI Diluent and detergent reagent system for whole-blood cell counting
IN Wong, Show Chu
PA Sequoia Turner Corp., USA
SO U.S., 7 pp. Cont. of U.S. Ser. No. 641,975, abandoned. CODEN: USXXAM
DT Patent
LA English
PI US 5227304 A 19930713 US 1992-918162 19920721
PRAI US 1991-641975 19910116
AB An improved multi-purpose blood diluent for use with a gentle lysing agent and improved detergent reagent system are disclosed which are esp. suitable for use in routine electronic enumeration and volumetric differentiation of blood cells. The preferred imidazole stabilizer used in the diluent reagent is found to be an excellent cell-stabilizing agent and buffer for maintaining cell morphol. during operation. A synergistic combination of a superior antimicrobial agent, the preferred Triadine-10, used in the diluent and the detergent reagents, not only prevents bacterial or fungal growth, but also helps to stabilize cells and to obtain distinct volumetric differentiation of certain leukocyte populations. The preferred Brij 35 in a balanced salt soln. has proved to be an efficient and cost-effective detergent to ensure accurate results and trouble-free operation of the analyzers.

L22 ANSWER 67 OF 173 CA COPYRIGHT 1999 ACS
AN 118:97269 CA

TI Evaluation of an automated system for hemoglobin measurement in animals
AU Callan, Mary Beth; Giger, Urs; Oakley, Donna A.; Scotti, Mary V.; Shofer, Frances S.
CS Sch. Vet. Med., Univ. Pennsylvania, Philadelphia, PA, 19104-6010, USA
SO Am. J. Vet. Res. (1992), 53(10), 1760-4 CODEN: AJVRAH; ISSN: 0002-9645
DT Journal
LA English
Biomic
AB One automated system photometrically measures blood Hb concn. after conversion of Hb to azide metHb without diln. and was found to be a simple and accurate instrument for use in human medicine. The authors evaluated the system for its accuracy in measuring blood Hb concn. in animals by comparing it with std. techniques and for its suitability in veterinary practice. Blood samples, anticoagulated with potassium EDTA, from 78 healthy animals (33 dogs, 17 cats, 13 horses, and 15 cows) and 58 dogs and 4 cats with various blood abnormalities (10 anemia, 11 polycythemia, 21 lipemia, 16 leukocytosis, and 6 icterus) were analyzed. In all species, blood Hb concn. of healthy animals detd. by the system was comparable to that measured by std. cyanmetHb methods (ie, an automated counter; rI = 0.987 to 0.998 and a Hb kit, rI = 0.946 to 0.993). The aforementioned system also yielded similar values to those obtained by use of std. methods in anemic, polycythemic, and icteric dogs and cats. Moreover, the system reads the absorbance at 2 wavelengths to correct for turbidity, and therefore, accurately measured Hb concn. in blood samples with severe lipemia (triglycerides concn. > 500 mg/dL) and marked leukocytosis (>50,000 WBC/μL), whereas other std. Hb techniques are known to give falsely high results. The automated system compares favorably to std. methods, and is a simple and accurate instrument to quickly measure Hb concn. in animals.

L22 ANSWER 107 OF 173 MEDLINE
AN 88226262 MEDLINE
DN 88226262
TI Evaluation of leukocyte number by using an automated blood cell counter and a traditional hematological method in animals irradiated with gamma rays.
AU Mackova N; Misurova E
CS Department of General Biology, Faculty of Science, University Kosice, CSSR.
SO FOLIA HAEMATOLOGICA. INTERNATIONALES MAGAZIN FUR KLINISCHE UND MORPHOLOGISCHE BLUTFORSCHUNG, (1987) 114 (6) 810-6. Journal code: F0F.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
AB Female mice were irradiated with a single whole body dose of 7 Gy of gamma-rays. Leucocyte numbers were monitored in the peripheral blood using automated blood cell counter Coulter counter and a traditional hematological method with a light microscope in the Burker chamber. Reticulocyte numbers, RNA blood concentration, spleen weight and morphological changes in spleen and bone marrow were also studied. In the period between 15th-19th days after irradiation the numbers of leucocytes obtained by CC counting were manifold higher than those obtained by microscope counting. Since this period is characterised by a steep increase in the reticulocyte number and RNA concentration in blood as well as by increased weight of spleen as the result of marked regeneration of extramedullar erythropoiesis, leukocytes as well as reticulocytes are assumed to be additionally registered by the automated counter CC in this period, probably due to a higher resistance of reticulocytes to the lysing agent Zapoglobine.

L22 ANSWER 108 OF 173 MEDLINE
AN 87165315 MEDLINE
DN 87165315

TI Modification and evaluation of a multichannel blood cell counting system for blood analysis in veterinary hematology.
AU Weiser M G
SO JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, (1987 Feb 15) 190 (4) 411-5. Journal code: HAV. ISSN: 0003-1488.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
Bionic
AB A multichannel, semiautomated, blood cell counting system (Coulter Counter Model S550) was modified for use in veterinary hematology by increasing both the erythrocyte and leukocyte aperture currents to 225 V and 195 V, respectively, followed by calibration with human blood. It was evaluated by use of 350 samples from dogs, cats, horses, and cows. Values for leukocyte count, erythrocyte count, mean corpuscular volume, and hematocrit generated by the S550 were compared with values generated by an automated multichannel counter with histogram capability and other reference procedures when appropriate. Mean differences for values between S550 and reference values were less than calibration tolerance limits for the instrument. Correlation coefficients were excellent for all values of each species. To assess behavior of leukocytes of the different species with respect to the counting threshold, leukocyte size distribution histograms were generated for all samples analyzed on the S550. Means for mean leukocyte volumes in diluent and lysing reagents were 55.5, 56.6, 67.4, and 72.8 fl for dogs, cats, horses, and cows, respectively. Canine leukocyte counts, because of small leukocyte size, were an average of 14% less for 5 samples analyzed on the unmodified instrument, compared with analysis after increasing the leukocyte aperture current. Leukocyte threshold failures attributable to interfering particles, resulting in falsely high counts, were recognized in 14%, 10%, 8% and 0% of feline, bovine, canine, and equine samples, respectively. The magnitude of error in these samples averaged 5% for cows and dogs, but was considered not important. However, leukocyte counts of feline samples in this group averaged 44% falsely high.

L22 ANSWER 110 OF 173 MEDLINE
AN 87177022 MEDLINE
DN 87177022
TI Spurious elevation of automated leukocyte counts induced by Fluosol DA 20%.
AU Talley R L; Hodges G R; Worley S E; Lotuaco L G
SO RESEARCH COMMUNICATIONS IN CHEMICAL PATHOLOGY AND PHARMACOLOGY, (1987 Jan) 55 (1) 117-31. Journal code: R62. ISSN: 0034-5164.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
AB During studies with Fluosol DA 20% (FDA) in rats, an artifactual leukocytosis was observed when an impedance type electronic cell counter was used. The effect was found to be directly related to the duration of the interval between addition of an erythrocyte lysing fluid and counting, observed up to 11 d after transfusion with FDA, blood cell associated, reproducible in vitro, FDA concentration dependent, temperature dependent, and present when human blood was used instead of rat blood. Microscopically, the effect appears to be the result of agglutination of lysed erythrocyte membranes due to the interaction of erythrocytes, the emulsion component of FDA, and the quaternary ammonium salt component of the lysing fluid. These data suggest that FDA causes subtle changes in erythrocytes and raises the possibility that other cells may be similarly affected.

L22 ANSWER 124 OF 173 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1985:422321 BIOSIS
DN BA80:92313

TI APPLICATION OF AN AUTOMATED HEMATOLOGY ANALYZER HA-5 TO THE HEMATOLOGIC TESTING OF RAT ESPECIALLY ON CHRONOMETRIC CHANGES IN RED BLOOD CELLS.
AU NISHIKAWA T; WADA S; KOSHIMURA T; TSUTSUI M; JOSHIMA H; AOKI K; NAGASAWA T; KINOSHITA T
CS DEP. ORAL PATHOL., OSAKA DENTAL UNIV., 1-47, KYOBASHI, HIGASHI-KU, OSAKA 540, JPN.
SO J OSAKA ODONTOL SOC, (1985) 48 (1), 88-98. CODEN: SIGAAE. ISSN: 0030-6150.
LA Japanese
AB In animal experiments requiring rapid treatment of a large number of blood sample, improved efficiency and precision in measurement of hematological values was obtained by introducing an automated hematology analyzer. It was necessary to discuss not only the conditions of application of an auto-hematology analyzer for human blood to the hematological testing of small animals, but also changes in blood attributable to a variety of procedures; these conditions and changes served as basic data. Application of the hematology analyzer HA/5 to rat blood is reported and measurement conditions and chronometric changes in red blood cells are discussed on the basis of measurement of hematological values, microscopic morphological findings and measurement of the volume of hemolysis of 51Cr-labeled red blood cells or 59Fe-labeled new red blood cells. The threshold value at measurement of red blood cell count (RBC) should be 2.5, and that of white blood cell count (WBC), 2.5. In principle, the measurement should be conducted immediately after blood collection; no special processing is given to values obtained within 6 h after. When a long time is required from blood collection until the measurement, blood should be kept at a low temperature and a 2nd dilution should be done just before RBC measurement. When HA/5 was used under these conditions, the measurement results were close to those obtained by routine manual methods in most of the items. HA/5 can be applied to rat blood. As to chronometric changes in red blood cells, RBC decreased and morphology changed from discocytes to echinocytes, and then to stomatocytes; hemolysis occurred. The amount of hemolysis increased in course of time. 51Cr-labeled red cells were more likely to lyse than 59Fe-labeled new red cells. In application of HA/5 to rat blood, abundant caution should be paid on protection of blood cells, especially erythrocytes.

L22 ANSWER 125 OF 173 BIOSIS COPYRIGHT 1999 BIOSIS
AN 1985:422322 BIOSIS
DN BA80:92314
TI APPLICATION OF THE HEMATOLOGY ANALYZER HA-5 TO CLINICAL HEMATOLOGICAL VALUES IN HAMSTER ESPECIALLY ON MEASUREMENT CONDITIONS.
AU NISHIKAWA T; TOMITA J; MIZUNO M; OKAMOTO J; ZEN M; KANOU N; TSUTSUI M
CS DEP. ORAL PATHOL., OSAKA DENTAL UNIV., 1-47, KYOBASHI, HIGASHI-KU, OSAKA 540, JPN.
SO J OSAKA ODONTOL SOC, (1985) 48 (1), 78-87. CODEN: SIGAAE. ISSN: 0030-6150.
LA Japanese
AB Auto-hematology analyzers are currently used to measure hematological values when many samples are handled because of good reproducibility and measuring capacity. RBC [red blood cells], WBC [white blood cells], Hb, Ht [hematocrit] were measured in hamster blood using Hematology Analyzer HA/5 (HA/5) and routine manual methods as well, to examine measurement conditions when the analyzer is applied to the blood test of small experimental animals. Threshold values at measurement of blood cells should be 2.0 for RBC and 3.0 for WBC. Although it is ideal to conduct measurement immediately after blood collecting, if it is within 6 h after, no special processing is given measurements. When a long time is required from blood collecting until measurement, blood should be kept still at a low temperature and 2nd dilution should be done soon before RBC

measurement. Churning sould be performed immediately before measurement, but not excessively. In measuring WBC and Hb, 100 μl of lysing and Hb reagent should be added and 5 min later, measurement commenced. When HA/5 was used in the above conditions, measurement results were close to those by routine manual methods in most of the items. HA/5 can be applied also to hamsters.

L22 ANSWER 132 OF 173 MEDLINE
AN 84281413 MEDLINE
DN 84281413
TI A new method for fast blood cell counting and partial differentiation by flow cytometry.
AU Valet G
SO BLUT, (1984 Aug) 49 (2) 83-90. Journal code: A8W. ISSN: 0006-5242.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
AB A new blood counting method by flow cytometry is described which determines absolute counts and relative proportions of erythrocytes, reticulocytes, thrombocytes, lymphocytes and granulocytes from one sample of saline diluted human or animal blood. Staining time is 2 to 5 min and measuring time between 1 and 2 additional minutes. Measured simultaneously are the electrical cell volume, the green and optionally also the red fluorescence of the transmembrane potential sensitive dye 3,3-dihexyloxacarbocyanine DiOC6(3) and the RNA/DNA stain acridine orange (AO). Work is under way to fully automate staining, measurement and data evaluation. The use of stains by which blood cell counting and biochemical analysis can be combined offers new possibilities for routine blood cell counting without requirement for additional time. The potential of such stains is that pathologic cell conditions which are not, or not yet reflected in the cell count may be earlier detectable by biochemical stains.

L22 ANSWER 139 OF 173 MEDLINE
AN 83002631 MEDLINE
DN 83002631
TI An assessment of the Ortho ELT-8.
AU England J M; Chetty M C; Chadwick R; Woodhead G B
SO CLINICAL AND LABORATORY HAEMATOLOGY, (1982) 4 (2) 187-99. Journal code: DKF. ISSN: 0141-9854.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
AB The Ortho ELT-8 is an automated blood counter which appears to be safe, precise and free from carry-over. Red and white cell results generally agree with those on the Coulter Counter, Model S, though discrepancies were noted with the WBC and PCV. Reference methods showed the Model S WBC results tended to be inaccurate on the discrepant samples though neither instrument was predominantly responsible for the PCV discrepancies. The ELT-8 platelet count tended to be higher than with the Thrombocounter/ Thrombofuge system. When packed cells were diluted in autologous plasma serious variations in the red cell indices (MCV, MCH & MCHC) were first found due to incorrect voltage-frequency converter setting. Even after this setting had been corrected some variations in the MCH and MCHC were still apparent. In the UK National External Quality Assessment Scheme the ELT-8 results on animal bloods did not agree with those produced by Model S users; this discrepancy probably being due to differences between the light-scattering and aperture-impedance technology.

L22 ANSWER 142 OF 173 MEDLINE
AN 82107094 MEDLINE

DN 82107094
TI Electronic counting of dog leucocytes. Discrepancies arising from calibration with Coulter standard 4C and with the haemocytometer.
AU Dixon J B; Faulkner M; Green J R
SO RESEARCH IN VETERINARY SCIENCE, (1981 Sep) 31 (2) 249-52. Journal code: R7D. ISSN: 0034-5288.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
AB The size distributions of leucocytes in canine blood and in standard 4C are markedly different. The use of 4C to calibrate Coulter counters may result in the selection of a threshold setting for canine leucocytes which is too high. Repeated hand counting may be used as a method of calibration, but regular discrepancies occur between hand and electronic counts which are attributable to the differing lytic actions of the diluents used, acetic acid having a more marked effect than commercial Zapoglobin. Canine leucocytes did not show significantly increased lysis when subjected to Zapoglobin at approximately four times the standard concentration, but did do so on exposure to the standard concentration for longer than five minutes. The degree of discrepancy between hand and electronic counts varied in individual dogs suggesting that there is an inconstant leucocyte subpopulation which behaves differently in response to different lytic agents.

L22 ANSWER 172 OF 173 CA COPYRIGHT 1999 ACS
AN 79:75610 CA
TI Combined electronic and optical apparatus for analyzing liquid samples
IN Coulter, Wallace H.
PA Coulter Electronics, Inc.
SO U.S., 8 pp. CODEN: USXXAM
DT Patent
LA English
PI US 3743424 A 19730703 US 1970-91130 19701119
PRAI US 1970-91130 19701119
AB The app. may be used for counting white cells in a sample suspension of white cells in a diluent and also measuring the Hb in the same sample. The suspension is formed by lysing a blood diln. to provide only white cells and to release Hb from red cells. The app. consists of a particle counting device and an optical hemoglobinometer to measure the Hb.

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STN INTERNATIONAL LOGOFF AT 14:40:02 ON 17 SEP 1999